

I CLAIM:

1. A method for the non-integer scaling of bi-tonal image files comprising
selecting a bi-tonal image file for non-integer scaling by a selected scaling factor,
5 and

with respect to that selected image file, applying scaling processing in a manner
which includes a pair of line-by-line, one-dimensional image expansions, each employing
the selected scaling factor, with these two image expansions being separated by one step
involving orthogonal rotation of the image file.

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2. A method for scaling a bi-tonal image file by a non-integer scaling factor
to produce, from a selected source image, an orthogonally rotated, scaled bi-tonal output
image comprising

selecting a bi-tonal image for non-integer scaling processing,
15 performing a first, one-dimensional, line-by-line, lateral image expansion
applying the selected scaling factor,

orthogonally rotating the image data file resulting from this first expansion step,
and

following said rotating, performing a second, one-dimensional, line-by-line lateral
20 image expansion also by applying the selected scaling factor, thus to produce the desired,
orthogonally rotated, non-imager-scaled bi-tonal output image.

3. A method for scaling a selected bi-tonal image file by a selected scaling factor to produce a scaled, non-rotated, bi-tonal output image comprising

selecting a bi-tonal image for non-integer scaling processing,

5 performing in one direction one orthogonal rotation of the selected image file,

with respect to that rotated image file, performing a first one-dimensional, row-by-row lateral image-file expansion employing the selected non-integer scaling factor,

performing thereafter a second orthogonal rotation with respect to that first, one-dimensional expanded image file, with this rotation taking place in the opposite direction

10 of rotation relative to the first described image-file rotation, and

then performing a second one-dimensional, line-by-line image file expansion utilizing the selected scaling factor, thus to produce the desired output non-rotated non-integer scaled bi-tonal image.

4. A method for non-integer scaling of a selected-bi-tonal image file by a selected scaling factor, with selectability offered with respect to whether the processed output bi-tonal image is to be rotated or non-rotated relative to its starting orientation

5 comprising

selecting a bi-tonal image file for non-integer scaling by a selected scaling factor,

offering a choice of whether or not a final scaled bi-tonal output image is to be rotated or not with respect to its initial rotational orientation, and

if selection is made to produce a rotated output image, then applying to the
10 selected image file a pair of orthogonally related, one-dimensional, line-by-line image expansions employing the selected scaling factor, and intermediate these two image expansion steps performing a single orthogonal rotation of the image file, and if the selection is to produce a non-rotated output image, employing a pair of one-dimensional line-by-line image file lateral expansions utilizing the selected scaling factor, interleaved
15 with a pair of orthogonal, counter rotations of the image file.